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EXAMINER	
AMINI, JAVID A	

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/256,368	SATO ET AL.	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4 and 5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's amendment with respect to independent claim 1 has been considered but are moot in view of the new rejection of the second paragraph of 35 U.S.C. 112. And, Applicant's arguments filed October 07, 2004 have been fully considered but they are not persuasive.

Because, Applicant on page 10, lines 1-16 argues that the reference Stokes discloses a method for analytic generation of a multidimensional table that uses color characteristic data associated with an output device. Examiner's reply: Does it mean, the Applicant's invention does not use color characteristic data to generate a logical multidimensional table? Applicant in amended claim 1 lines 5-7 claims for developing a multidimensional lookup table requires to input the color characteristic data. Applicant on the same page lines 18-25 argues that the reference Stokes pre-generates (predetermines) the multidimensional lookup table to store in memory prior to receiving any input images. Examiner's reply: Stokes's invention generates a multidimensional lookup table just for selected printer. Examiner's comment: For example: A user may select a predetermined printer in Windows environment.

Applicant on page 11 lines 5-6 argues that Stokes only uses color characteristic data associated with an output device. Examiner's reply: It is very obvious the color characteristic data associated not only with an output device, but also with an input device. For example: If the color characteristic input data is combination of RBG, then the output color characteristic should be comprised of the input color characteristic.

Applicant on page 11 lines 9-22 argues the reference Spaulding fails to disclose the recited features. Spaulding discloses a color transform system that uses the color characteristic of the actual input image itself. Examiner's reply: Spaulding in fig. 8 shows where a slide bar 80 is

used to adjust the image contrast and preview images 81 and 82 are provided corresponding to the color reproduction associated with the predetermined transforms. Showing these preview images will give the user a visual representation of the effect generated by adjusting the transform weights. The preview images can be either a standard reference image, or possibly the actual image that the user is preparing to display/print (output). It is not clear from the claim's language, what does Applicant claim?

Examiner's suggestions:

a- Applicant should explicitly and conceptually specify the specification of a "multidimensional lookup table".

b- Applicant should explicitly specify whether the claim invention claims "a method", " system", "hardware" or "a computer program".

c- Applicant should clarify the questions from previous paragraphs.

The Applicant is encouraged to schedule an interview with the Examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 4-5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant on page 2 on "amendments to the claims" in claim 1, lines 20-21 discloses ".... A plurality of color input devices including one of a scanner, digital camera, and **a monitor**." A monitor is an output device to display image data. How can a monitor be considered as an input device? The limitation a monitor as an input renders the claim indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes, and further in view of Spaulding et al. (hereinafter referred as a Spaulding).

1. Claim 1.

As for claim1, "A color characteristic description apparatus for producing color characteristic data for use when supplied image is converted into output image data, comprising", see Spaulding in col. 2, lines 57-58 teaches a continuous range of color rendering choices is provided for a digital color output device such as a printer or a CRT. "a lookup table of color characteristic data, said color characteristic data being associated with color characteristic of an input device inputting said supplied image and to be developed into a multidimensional lookup table in response to inputting of said supplied image, wherein said lookup table is composed of only characteristic points which indicate the relationship between supplied image signals and output image signals which are determined to be impossible to be developed in a table development process which is performed when said lookup table is developed into said multidimensional lookup table wherein said input device is one of a plurality of color input devices including one of a scanner, digital camera, and a monitor". Spaulding in col. 2, lines 41-49 teaches transforming input color value of a digital image (it is obvious that a digital camera or a scanner or another source of graphical storage would have produced a digital image).

Stokes in col. 2, lines 63-66 teaches the multi-dimensional lookup table used during runtime to correct an input image so that it is printed with the desired visual characteristics. Spaulding in fig. 8 shows where a slide bar 80 is used to adjust the image contrast and preview images 81 and 82 are provided corresponding to the color reproduction associated with the predetermined transforms. Showing these preview images will give the user a visual representation of the effect generated by adjusting the transform weights. The preview images can be either a standard reference image, or possibly the actual image that the user is preparing to display/print. Since the user interface will typically be implemented on a video display, and the final output device will frequently be some other device, the previewed images may only be a simulation of the color reproduction, which will be obtained on the actual output device. The following step of "wherein color characteristic data which is produced by said characteristic description apparatus contains, in addition to said lookup table, an identifier for identifying a table development method which is employed when said lookup table is developed into the multidimensional lookup table". Spaulding and Stokes do not explicitly teach the input image from a digital camera. However, Spaulding in col. 2, lines 49-53 teaches such transform responding to input color values of a digital image and producing output color values which can be used by the particular device. And Stokes in fig. 1 illustrates a pc connected directly to a printer. Spaulding in col. 2, lines 9-14 teaches typically the color rendering options are implemented by storing a description of the transformations, which must be applied to the color values for each choice. These transformations may be stored as one or a combination of color-correction matrices, 1-D Look-Up Tables (LUTs), 3-D LUTs, etc. (1,1,0) and (1,1,1). Stokes does not explicitly specify an identifier for identifying a table development method. But

Spaulding in col. 2, lines 40-62 teaches storing a plurality of color transforms, each such transform responding to input color values of a digital image and producing output color values which can be used by the particular device; and interpolating between the plurality of transforms to produce an intermediate transform which is user desirable for transforming the input color values. A continuous range of color rendering choices is provided for a digital color output device such as a printer or a CRT. The continuous adjustment is obtained by providing transforms for a small number of color transformations representing the extremes of the desired adjustment range and interpolating an intermediate transform based on a user-specified set-point. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Spaulding into Stokes in order to have a minimum impact on the device memory requirements, and storing a plurality of color transforms (it is obvious to set an identifier), each such transform responding to input color values of a digital image and producing output color values which can be used by the particular device; and interpolating between the plurality of transforms to produce an intermediate transform which is user desirable for transforming the input color values. The transforming of input color value of a digital image is obvious, because a digital camera or a scanner or another source of graphical storage would have produced a digital image. Users have more flexibility in the way an image is rendered to some particular device.

2. Claim 2.

As for claim 2, "A color characteristic description apparatus according to claim 1, wherein said lookup table composed of the characteristic points is described such that fundamental colors composed of primary colors of a color device having the same signal values serve as the

characteristic points". Spaulding in fig. 7 FIG. 7 illustrates a case where a triangular slide bar 70 is combined with a conventional slide bar 71. The triangular slide bar might be used to adjust the color reproduction characteristics, while the conventional slide bar might be used to adjust the contrast of the tone reproduction. The step is also obvious, if the input image would be the same digital image.

3. Claim 4.

As for claim 4, "wherein color characteristic data which is produced by said color characteristic description apparatus contains, in addition to said lookup table, software for performing a table development process". Spaulding in col. 2, lines 10-24 teaches the color rendering options are implemented by storing a description of the transformations which must be applied to the color values for each choice. These transformations may be stored as one or a combination of color-correction matrices, 1-D Look-Up Tables (LUTs), 3-D LUTs, etc. Often the storage of these transformations may occupy a substantial amount of memory. This is particularly true for the case of the 3-D LUT, which is becoming increasing common in its usage. The addition of color rendering options will therefore have an impact on the memory requirements of the device and/or the device driver software. Additionally, attempting to provide any large number of options will also have an impact on the device driver design and quality assurance process. As more color rendering options are added, the amount of development and testing time increases proportionally.

4. Claim 5.

As for claim 5, "wherein color characteristic data which is produced by said color characteristic description apparatus further contains an identifier for identifying a table development method

and software for converting data developed into table into an ICC profile". The step is obvious because the system should be compatible with each other, therefore the ICC profile should be satisfied for converting color data.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

JEFFERY BRIER
PRIMARY EXAMINER